

REMARKS

Claims 1-17 stand rejected under 35 U.S. C. 112, second paragraph.

In claim 1, line 3, and claim 12, line 5, “which is isolated from said torque converter” is considered indefinite and in need of clarification as to whether the rotor is isolated and the nature of the isolation (electric, thermal or mechanical). Claims 1 and 12, as amended, refer specifically to the rotor being mechanically isolated, in accordance with the Examiner’s suggestion.

Claim 4 is now canceled.

Claim 8 has been clarified by deleting “said torque converter disposed within a” and adding a new element “a case containing the torque converter.”

Claim 19 is now cancelled.

These amendments overcome the bases for the rejection of the claims under 35 U.S.C. § 112, second paragraph.

Claims 1, 12-15 and 18-20 stand rejected under 35 U.S.C. § 102(b) as anticipated by Uchida et al. (U. S. Patent 4,958,095). Claim 1 has been amended to include the two elements from Claim 2: the flexible plate member and fastening members. Those elements are clearly distinguishable from the disclosure of Uchida, and Claim 2 has not been rejected on the basis of Uchida et al.

The Office action indicated that Claims 5, 7, 9-11, 16 and 17 would be allowable if rewritten to include all the limitations of the base claim and any intervening claims. Applicant has so amended the base (Claim 12), from which Claims 16 and 17 depend, by inserting the protruding ring element of claim 16. This overcomes the basis for the rejection of Claims 12 –15. Similarly, Claim 17 has been amended to include all the limitations of Claim 12 and Claim 17. New Claims 21 and 22, which depend from Claim 17, and include the elements of Claims 13 and 15 have been added. Finally, Claims 18-20 have been cancelled. These changes overcome the bases for the rejection under the Uchida patent.

Claims 1-3, 12-15 and 18-20 stand rejected under 35 U.S.C. § 102(b) as anticipated by Peter (U. S. Patent No. 5,103,127). Claim 1 of the present application, as amended, defines an invention that is different from that disclosed by Peter. As mentioned above, Applicant has amended Claim 1 to overcome the basis for the rejection under 35 U.S.C. § 112, second paragraph, by specifically reciting that the rotor is mechanically isolated from the torque converter. Peter describes and illustrates (See Col. 2, line 58 – Col. 3, line 2 and Figure 1) a rotor 80 having slotted laminations 82, and aluminum end rings 86, 88 retaining a number of parallel aluminum conductor bars 84. The individual laminae 82 are contoured to complement the surface of the torque converter input shell and are welded to the torque converter shell. Therefore, Peter does not teach a rotor that is mechanically isolated from the torque converter. Instead, Peter teaches away from such mechanical isolation and toward a rotor that is mounted on and welded to the torque converter.

Claim 1, as amended, defines the present invention in terms of a flex plate coupled to the torque converter by fasteners, which traverse the rotor. Fig. 1 of the Peter shows a flex plate 18 bolted to the torque converter casing, but the fastener 26 does not traverse the rotor. Instead fastener 26 engages the rotor, which is welded to the outer surface of the torque converter shell radially above the location of the fasteners 26. For this reason, Claim 1, as amended, should not be rejected on the basis of the Peter patent.

Claim 3 of this application claims the invention in terms of a second fastener which couples the central hub of the rotor to the crankshaft. Fig. 1 of the Peter patent shows that the rotor is not fixed to the crankshaft, but instead is mounted on the outer surface of the torque converter shell. For this reason, Peter does not teach the arrangement of claim 3 of the present application.

Regarding the other claims rejected on the basis of Peter: Claims 12 has been amended to include all the limitations of allowable Claim 16, as described above, and Claims 18-20 have been cancelled. These changes overcome the bases under the Peter patent for rejecting the claims.

Claims 1-4, 6, 8 12-15 and 18-20 are stand rejected under 35 U.S.C. § 102(e) as anticipated by Taniguchi et al. (U. S. Patent 6,478,101).

The Office action says that was cited for teaching a rotor 43 isolated from the torque converter. In the Taniguchi patent, Figs. 1-3 show, and the text at Col. 6, lines 44-58 describes that the rotor 43 is connected by a bolt 34a and nut 34b to the front cover of the torque converter and through the torque converter hub 17a to the pump case 22a. Here again, the rotor is not isolated from the torque converter, as the claims define the present invention, but the rotor is mechanically connected to it.

Furthermore, fasteners connect the flex plate 55 to the crankshaft 52, they do not traverse the rotor but instead mechanically connect the rotor to the crankshaft. But the claims define the present invention in terms of fasteners passing through the rotor, but not connected to the rotor. Fig. 2 shows the arrangement of these fasteners 39 and 36, which are connected to flex plate 32, bypassing or traversing the rotor. For these reasons Taniguchi does not support a rejection of Claims 1, as amended, or Claim 4, which depends from Claim 1.

Claim 6 stands rejected with reference to the Taniguchi patent. Taniguchi teaches nothing about a protruding pocket which overlays at least one fastener. Furthermore, this action has not cited specifically any teachings in Taniguchi for that protruding pocket.

Claim 8 stands rejected on the basis of the Taniguchi patent, which is cited for disclosing a bearing support member 46 and a bearing 31-46. The rotor 46 of the '101 patent is journaled on a center piece 31, with which it rotates through the torque path that includes bolt 34a and nut 34b, torque converter 30, and the weld at the left-hand end of center piece 31, which connects the center piece to the cover 30. The crankcase 52 provides a pocket 46 into which the rotor is seated, but there is no bearing for supporting the rotor on the crankshaft. In fact, there is no need for a bearing because the torque converter cover, rotor, and crankshaft turn at the same speed. Fig. 6 of the present application shows a bearing 110 provided between the casing and the rotor. The rotor turns relative to the casing, and the bearing is required for that purpose. In fact, Taniguchi and the other cited references from the prior art teach away from the need for a bearing because in each instance, the crankshaft and the rotor turn at the same rotation speed and in the same direction.

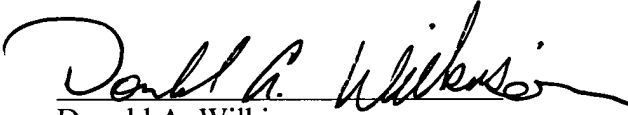
Claims 18-20 have been cancelled, and Claims 12- 15 have been distinguished over the prior art by the amendments and comments above. These changes overcome the bases rejecting the claims with reference to the Taniguchi patent.

Applicant proposes to amend Fig. 3 by redirecting the lead lines from apertures 28 and 30 to the openings in the rotor shown in Fig. 2. Support for this request is found in paragraph 21, where the description says that a flex plate 32 is coupled to the torque converter 14 by fasteners 34-39, each of which traverses a unique one of the rotor apertures such as 28, 30, thereby physically isolating or decoupling the rotor from the torque converter. The respective diameter of each aperture 28, 30 is substantially larger than the respective diameter of each of the fasteners 34-39. Fig. 2 clearly shows an arrangement in which the aperture in the rotor is substantially larger than the diameter of the attachments 36, 39.

In view of these amendments and comments, the claims remaining in the application (Claims 1, 3, 5-15, 17, 21 and 22) appear now in condition for allowance.

Applicant respectfully request reexamination of the application and that it be passed to issue.

Respectfully submitted,


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